

I claim:

1. A method for controlling fuel pressure for a fuel injected engine, comprising the steps of:

5        providing a fuel pump with an inlet port which is connectable in fluid communication with a fuel supply and an outlet port which is connectable in fluid communication with a fuel injector;

             measuring a fuel pressure at a location which is in fluid communication with said outlet port; and

10        controlling an operating speed of said fuel pump as a function of said fuel pressure measured at said location which is in fluid communication with said outlet port.

2. The method of claim 1, further comprising:

15        measuring airflow into said fuel injected engine;

             calculating a desired fuel flow as a function of a selected air/fuel ratio; and

             determining said operating speed of said fuel pump as a function of said desired fuel flow.

20    3. The method of claim 1, wherein:

             said controlling step comprises the step of transmitting a pulse width modulated signal to said fuel pump.

4. The method of claim 1, wherein:

25        a duty cycle of said pulse width modulated signal determines said operating speed of said fuel pump.

5. A fuel pressure control system for a fuel injected engine, comprising:

a fuel pump with an inlet port which is connectable in fluid communication with a fuel supply and an outlet port which is connectable in fluid communication with a fuel injector;

5 a fuel pressure sensor disposed at a location which is in fluid communication with said outlet port;

a controller connected in signal communication with said fuel pressure sensor and in signal communication with said fuel pump, said controller being configured to provide a signal to control an operating speed of said fuel pump as a  
10 function of a signal received from said pressure sensor.

6. The system of claim 5, further comprising:

an airflow sensor for measuring a rate of air flowing into said engine, said controller being configured to determine a desired fuel flow rate as a function of  
15 said rate of air flowing into said engine and a selected air/fuel ratio, said operating speed of said fuel pump being determined as a function of said desired fuel flow rate.

7. The system of claim 6, wherein:

20 said controller is configured to transmit a pulse width modulated signal to said fuel pump which is representative of said operating speed.

8. The system of claim 7, wherein:

a duty cycle of said pulse width modulated signal determines said operating  
25 speed of said fuel pump.

9. A fuel pressure control system for a fuel injected engine, comprising:

a fuel pump with an inlet port which is connectable in fluid communication with a fuel supply and an outlet port which is connectable in fluid communication with a fuel injector;

5 means for measuring a fuel pressure at a location which is in fluid communication with said outlet port; and

means for controlling an operating speed of said fuel pump as a function of said fuel pressure measured at said location which is in fluid communication with said outlet port.

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10. The system of claim 9, further comprising:

means for measuring airflow into said fuel injected engine;

means for calculating a desired fuel flow as a function of a selected air/fuel ratio; and

15 means for determining said operating speed of said fuel pump as a function of said desired fuel flow.

11. The system of claim 10, wherein:

20 said means for controlling comprises a means for transmitting a pulse width modulated signal to said fuel pump.

12. The system of claim 11, wherein:

a duty cycle of said pulse width modulated signal determines said operating speed of said fuel pump.

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